

Application No. 10/722,164

REMARKS

Claims 1 to 61 are pending in the application. Claims 1 to 5, 20, 21, 28 to 30, 34, and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson et al. (U.S. Patent 6,336,965) in view of King et al. (U.S. Patent 6,057,399). Claims 6 to 19, 22 to 27, 31 to 33, and 37 to 61 have been objected to as being dependent upon a rejected base claim, and have been indicated to be allowable if rewritten in independent form.

Applicants initially point out that the status of claim 36 is not clear; while claim 36 is listed on the cover sheet of the Office Action as being among the rejected claims, it is not included in the specific grounds for rejection in the Office Action. Accordingly Applicants request clarification regarding the status of this claim.

In addition, Applicants point out that claims 37 to 61, which have been objected to as being dependent upon a rejected base claim, are already in independent form, and accordingly are in condition for allowance with no need for further amendment.

Applicants have amended claims 6, 22, 24, 25, 26, 27, 31, 32, and 33 either to place them in independent form or to make them dependent on a newly independent claim indicated to be allowable, thereby placing claims 6 to 19, 22 to 27, and 31 to 33 in condition for allowance.

The Examiner has rejected claims 1 to 5, 20, 21, 28 to 30, 34, and 35 as being unpatentable over Johnson et al. in view of King et al.

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Johnson et al. discloses various modified pigment products which are preferably capable of being dispersed in a variety of materials such as coatings, inks, toners, films, plastics, polymers, elastomers, and the like. The modified pigments are pigments having attached groups, such as polymeric groups, onto the pigment by means other than adsorption. A modified pigment product is described comprising a pigment having attached at least one group comprising the formula: $-X-(Nlon)_pR$ wherein X comprises an aromatic group or an alkyl group, Nlon comprises at least one type of non-ionic group, R represents hydrogen or comprises an aromatic group or an alkyl group, and p represents an integer of from 1 to 500. Modified pigment products are also described comprising a pigment having attached at least one alkylene oxide group or at least one polymeric group. In addition, other types of modified pigment products are described as well as their incorporation into inks, coatings, toners, films, plastics, polymers, elastomers, and the like. Methods of making the modified pigment products are also described.

King et al. discloses phase change ink additives which comprise quaternary ammonium salts that are useful in producing phase change inks with increased specific conductance. Suitable and adjustable specific conductance is necessary for reliable functioning of electronic type ink level sensing systems used in phase change ink jet printers. Phase change inks may also be encoded for type by virtue of their specific conductance.

The Examiner has stated that Johnson et al. teaches a modified pigment which has attached groups onto the pigment by

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means other than adsorption, that the reference further teaches that the modified pigment may be included in liquids (aqueous or nonaqueous) and ink (printing ink and ink jet inks), that the functional group attached to the pigment may include OR, COOR, SO₃H, and PO₃H₂, which are oxygen-containing functional groups, that typical inks that contain the pigments are phase change ink jet inks, lithographic, and ink jet applications, that Johnson et al. fails to teach the specific ink carrier claimed by Applicants, that King et al. teaches a phase change ink composition comprising a fatty amide containing material, that the fatty amide material comprises a tetra-amide containing material, that the preferred tetra-amide compounds for producing the phase change ink carrier composition are dimer acid based tetra-amides which preferably include the reaction product of a fatty acid, a diamine, and a dimer acid, that the fatty amide containing material can also comprise a monoamide such as stearamide, stearyl stearamide, and behenyl behenamide, that an isocyanate-derived may be used in combination with the amide-based carrier, that the compositional ranges of the ink carrier are about 10 to 50 weight percent tetra-amide compound, about 30 to 80 percent monoamide compound, about 0 to 40 weight percent tackifier, about 0 to 25 weight percent plasticizer, and about 0 to 2 percent antioxidant, that where the inks employ a colored isocyanate-derived resin as either the sole colorant material or uncolored resin may be used in combination with conventional phase change ink colorant material including dyes and/or pigments, and that the reference also teaches that polyethylene wax may be included in the ink composition. The Examiner is of the position that it would have been obvious to one of

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ordinary skill in the art to use the pigment as taught by Johnson et al. in the ink composition of King et al., because Johnson et al. teaches that the modified pigment may be used in a phase change ink composition.

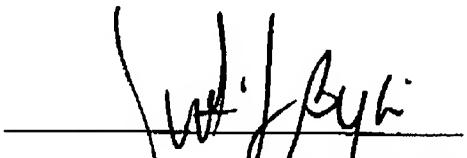
Applicants disagree with this position. Johnson et al. teaches modified pigment particles wherein a surfactant or polymer is chemically attached to the surfaces of the pigment particles prepared by reacting the pigment with a diazonium salt in the presence of the surfactant or polymer, as set forth in columns 7 and 8 of the reference. In contrast, the phase change inks of the present invention contain oxidized pigment particles. Oxidized pigment particles would not contain polymers or surfactants grafted to the surfaces thereof; these materials can be prepared by, for example, treatment with nitric acid or ozone, as set forth in the instant specification at page 28, lines 2 to 4. Accordingly, Applicants are of the position that the present invention as recited in claim 1 and the claims depending therefrom is patentable with respect to the teachings of these references.

Applicants believe that the foregoing amendments and distinctions place the claims in condition for allowance, and accordingly respectfully request reconsideration and withdrawal of all grounds for rejection.

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In the event the Examiner considers personal contact advantageous to the disposition of this case, she is hereby authorized to call Applicant(s) attorney, Judith L. Byorick, at Telephone Number (585) 423-4564, Rochester, New York.

Respectfully submitted,



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